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Inelastic neutron scattering studies on UNiGe

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We measured the inelastic scattering response of the uranium intermetallic UNiGe using the inelastic spectrometer PHAROS at the Manuel Lujan jr. Neutron Scattering Center, Los Alamos National Laboratory. Data were taken at various temperatures using incident beam energies of 25 and 100 meV. Below $T_N = 50$ K, there is evidence for a gap which is indicated by reduced scattering close to the elastic peak. Furthermore, we find a clear excitation around 25-30 meV in addition to the phonon background for temperatures below 130 K. The results are discussed in terms of spin waves with a gap formation in the excitation spectrum at the antiferromagnetic ordering temperature.